

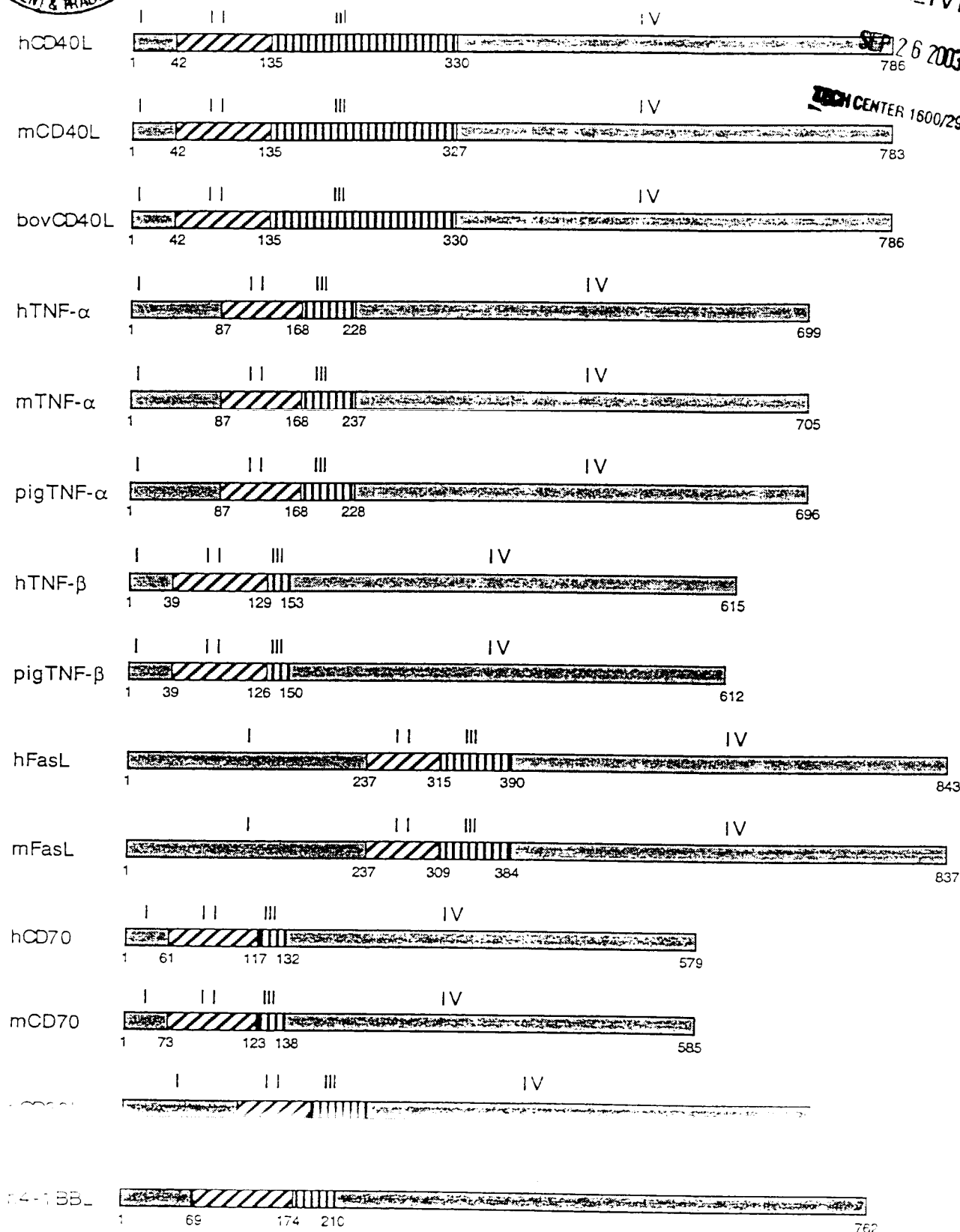


NOVEL EXPRESSION VECTORS CONTAINING ACCESSORY MOLECULE
LIGAND GENES AND THEIR USE FOR IMMUNOMODULATION AND
TREATMENT OF MALIGNANCIES AND AUTOIMMUNE DISEASES
Inventors: Thomas Kipps, et al. Serial No.: 08/981,272
Filing Date: December 1, 1997 Att. Docket No.: 041673/2069

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DOMAINS: I - Cytoplasmic Domain; II - Transmembrane Domain; III - Extracellular Domain; IV - Intracellular Domain

Figure 1



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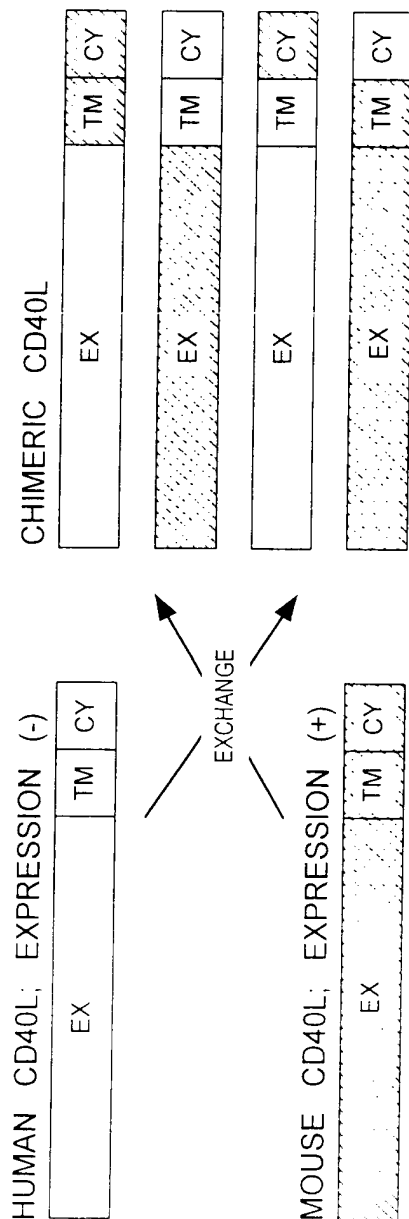
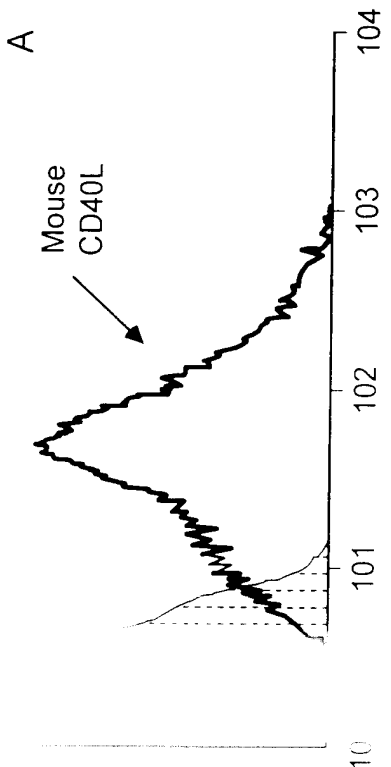


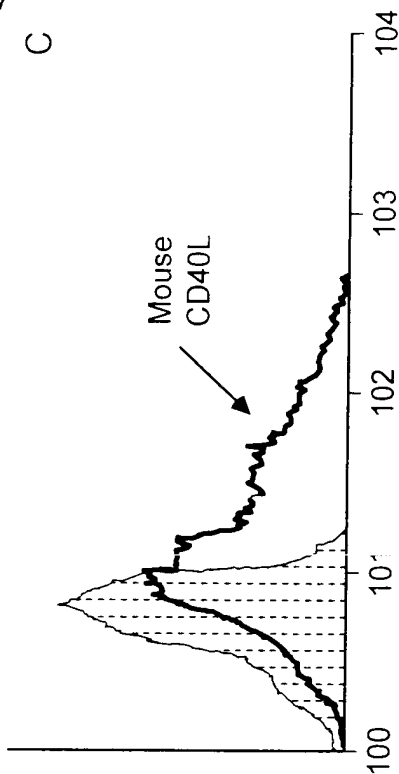
Figure 2



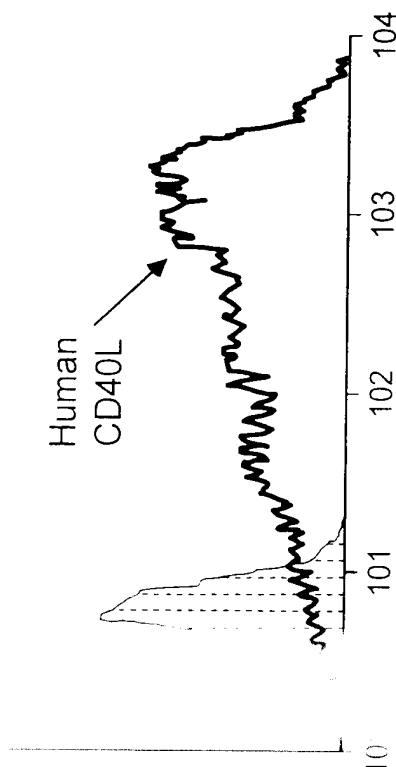
HeLa



CLL



Human CD40L



Human CD40L

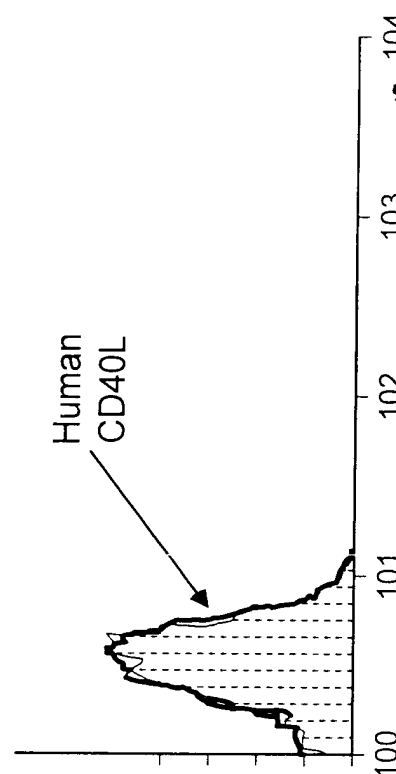
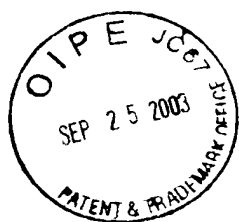


Figure 3

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LIGAND GENES AND THEIR USE FOR IMMUNOMODULATION AND
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Inventors: Thomas Kipps et al. Serial No. 08/982,172
Filing Date: December 1, 1997; Atty. Docket No. 041673-2069

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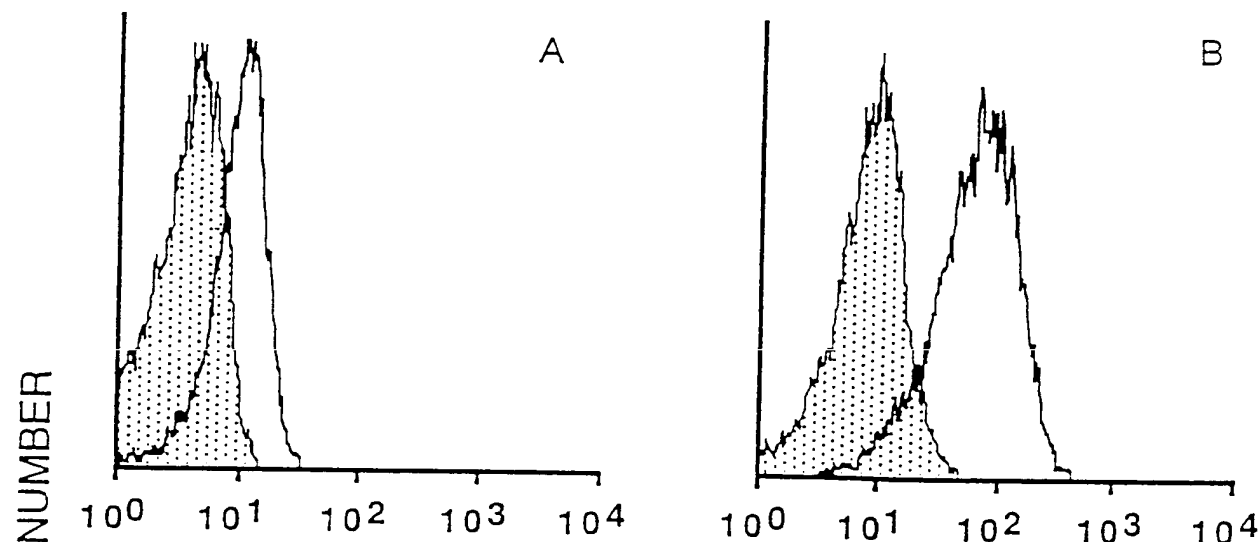
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NONINFECTED

+mCD40-L ADENOVIRUS

CD54 EXPRESSION



CD80 EXPRESSION

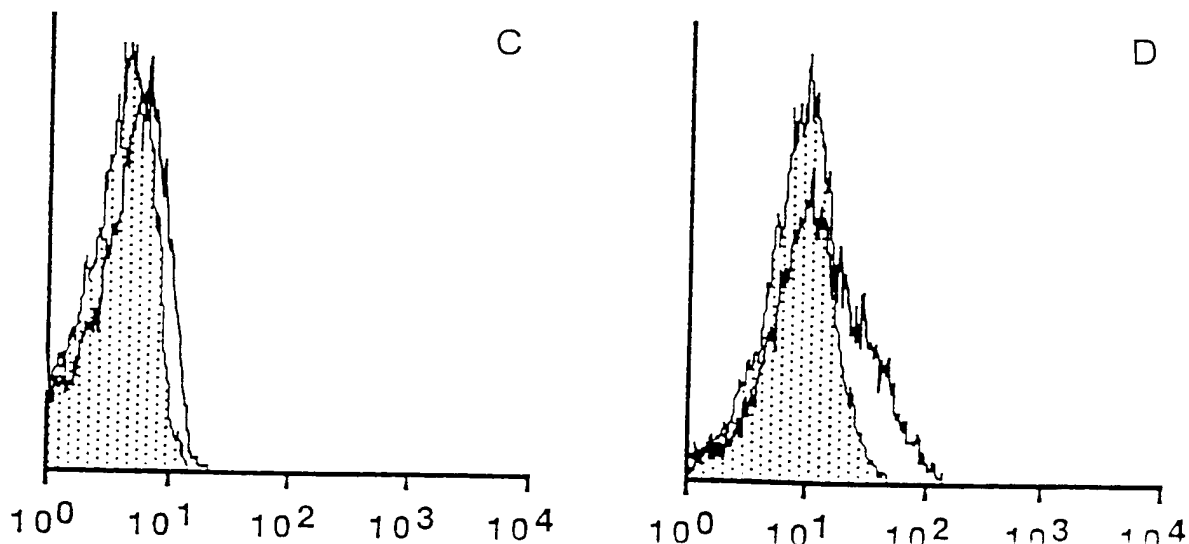


Figure 4



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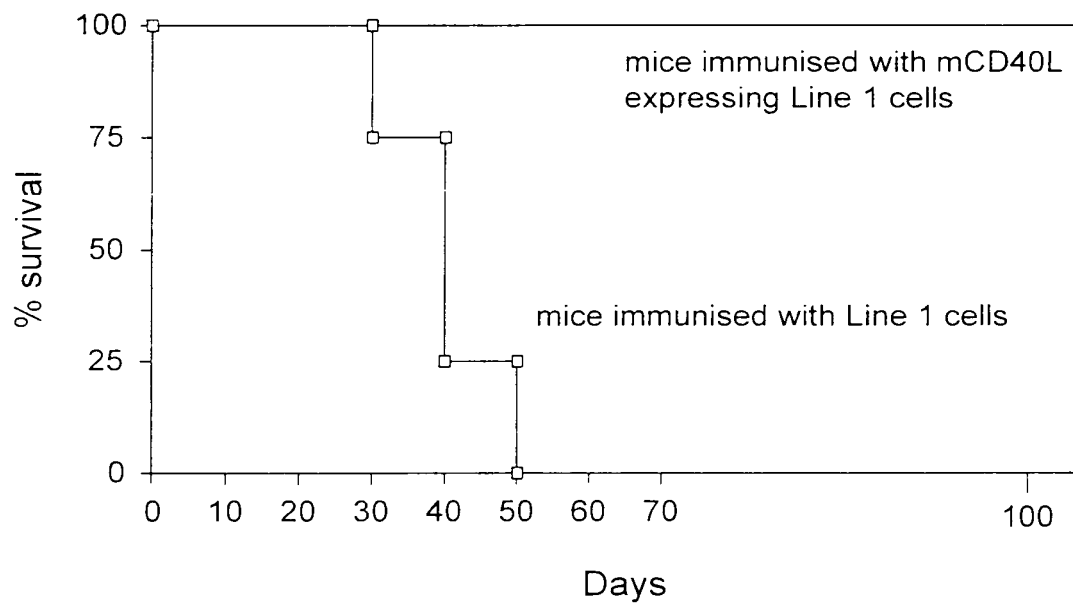


Figure 7



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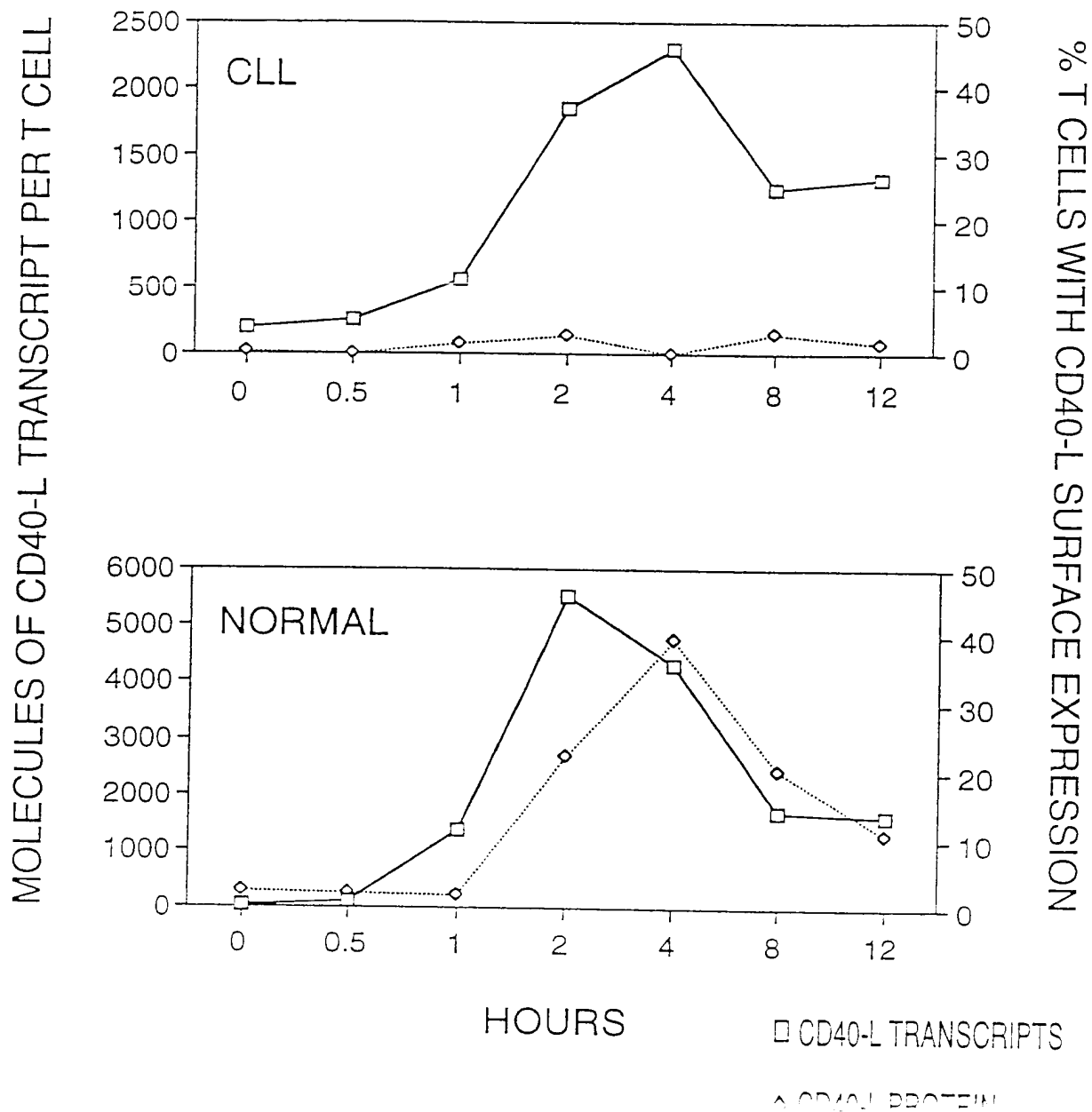
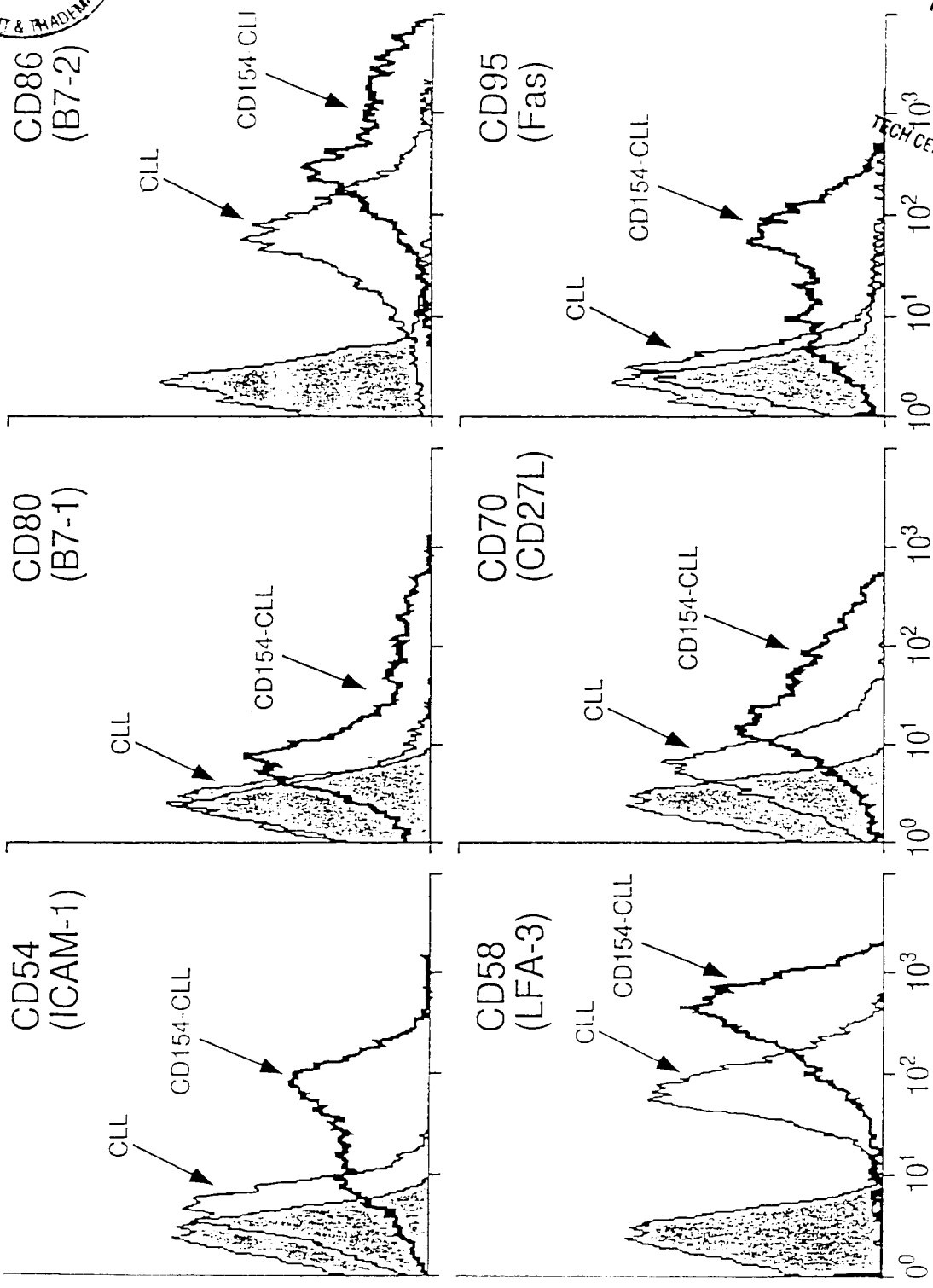


Figure 8



Green Fluorescence Intensity

June 10

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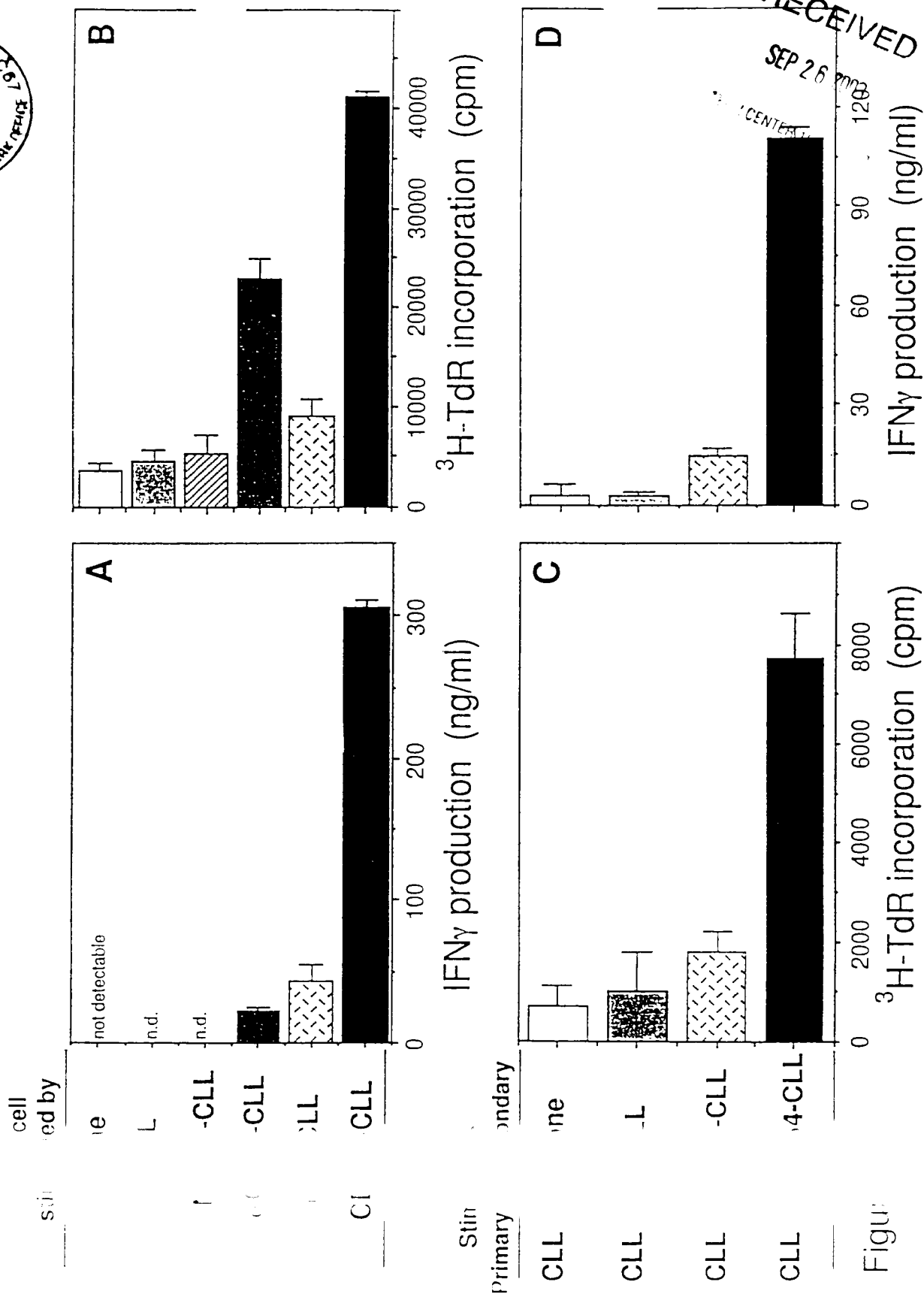


Figure 1

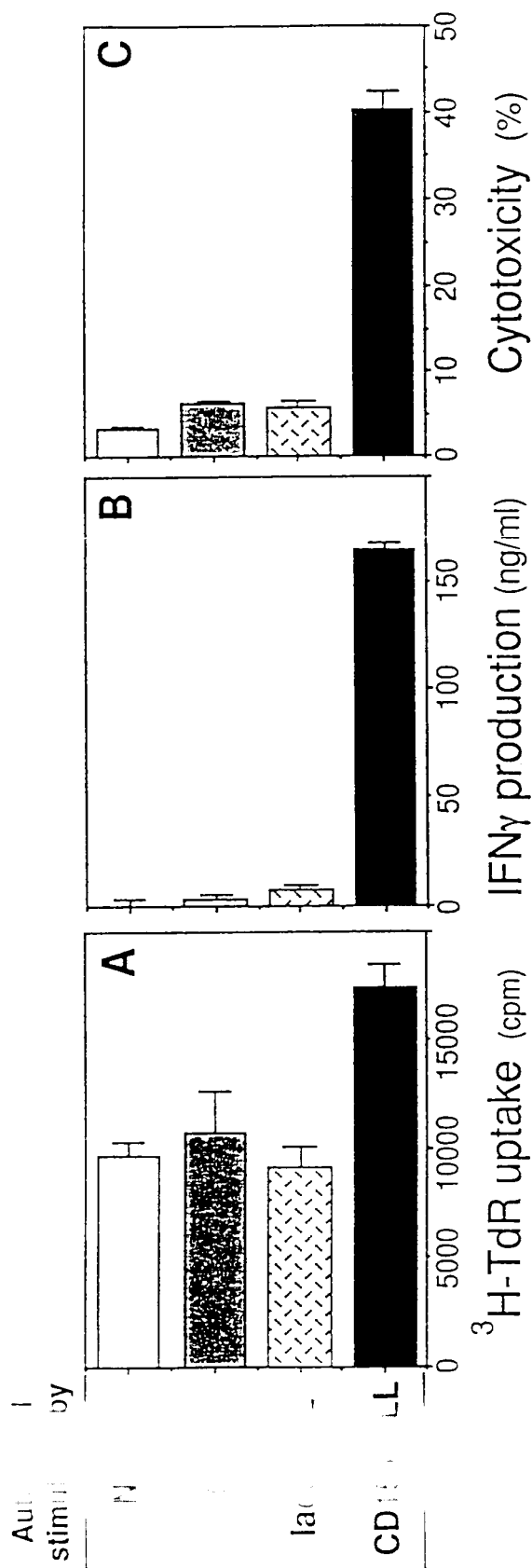


Figure 13

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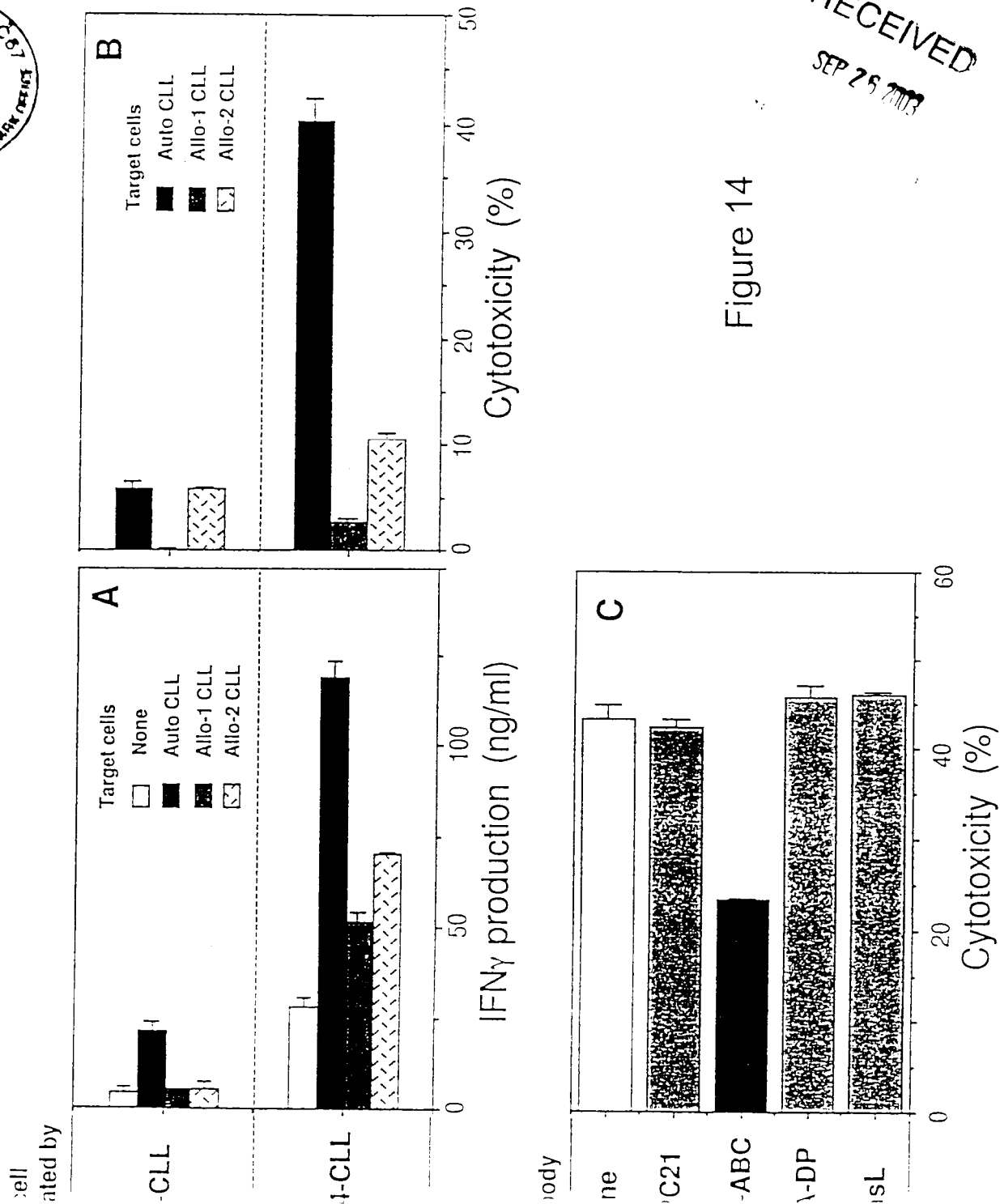


Figure 14

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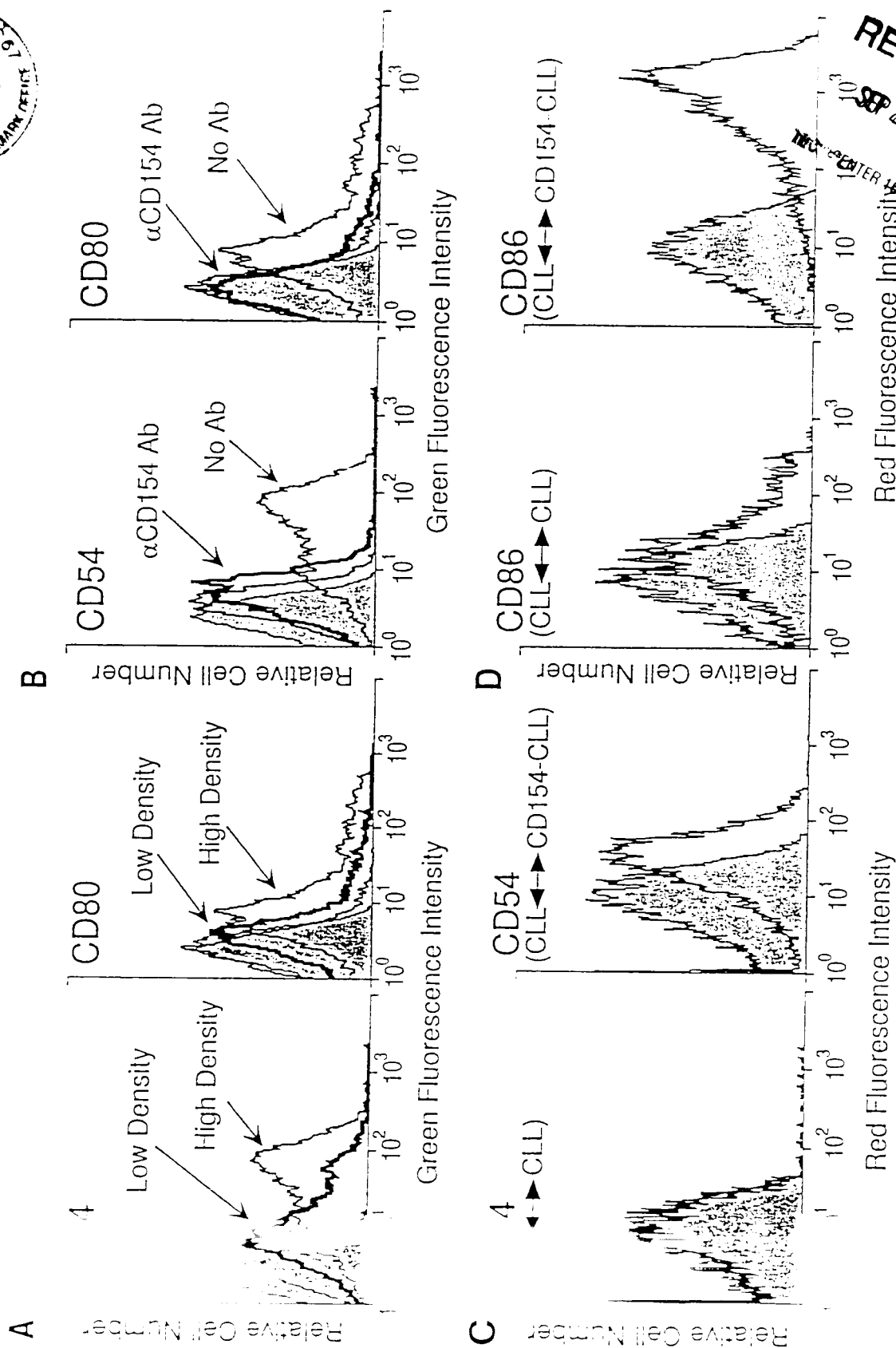


Figure 15

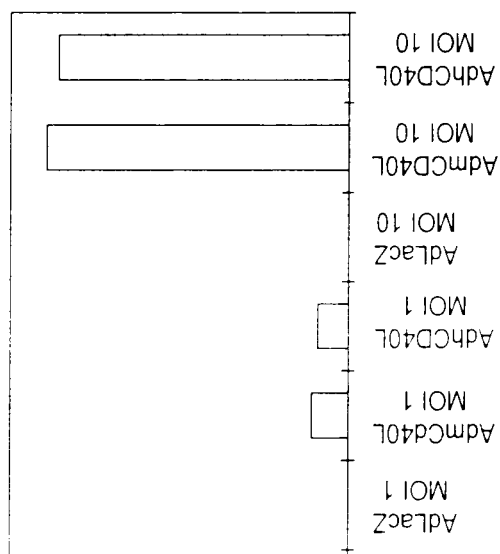
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A

% CD40L Expression

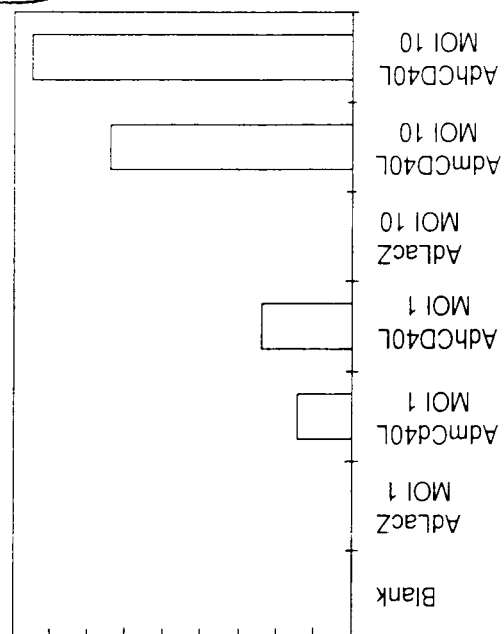
HeLa Cells



B

% CD40L Expression

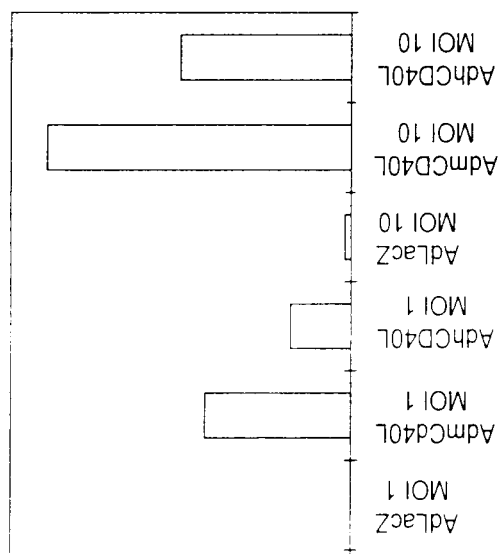
A427 Lung CA (CD40-)



C

% CD40L Expression

NCI 460 Large CellCA (CD40+)



D

% CD40L Expression

SK-Mes-1 Squamous Cell (CD40++)

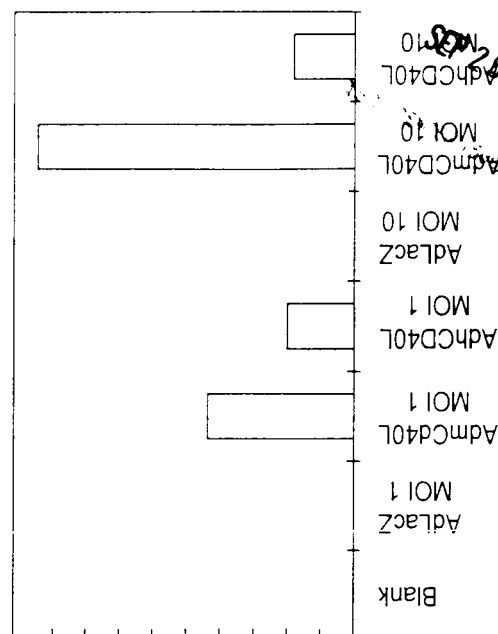
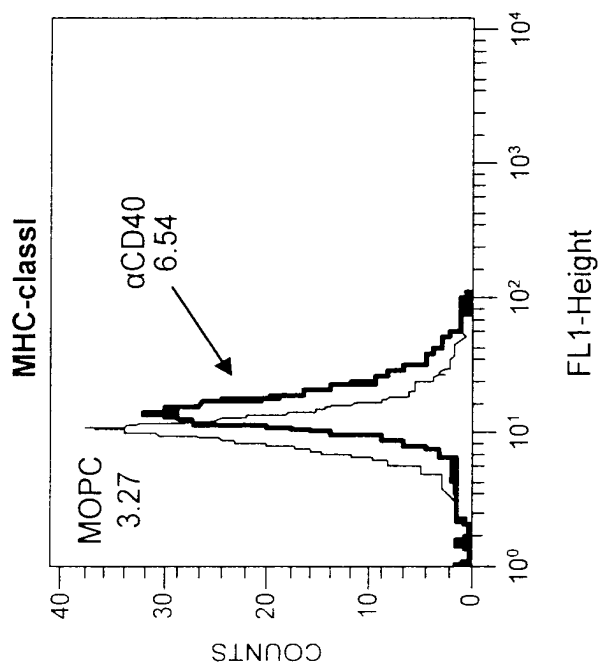
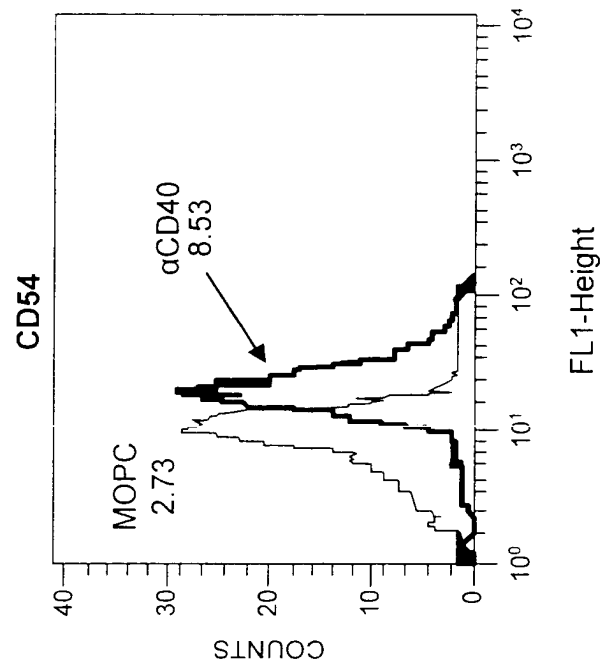
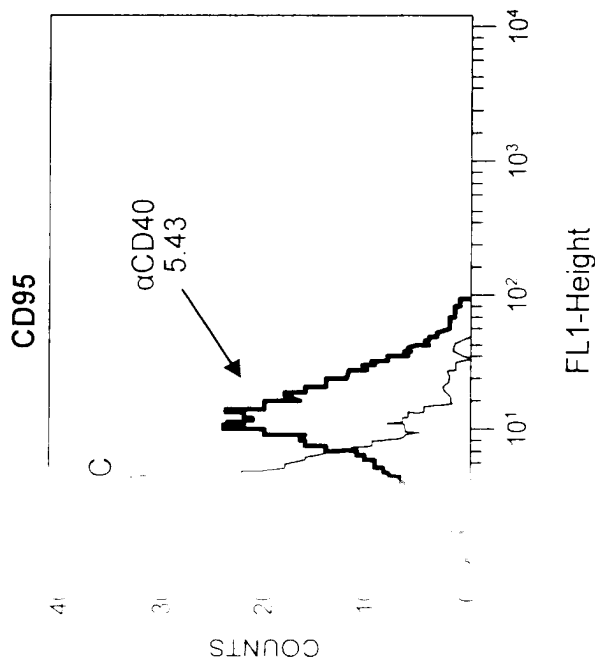


Figure 21

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A

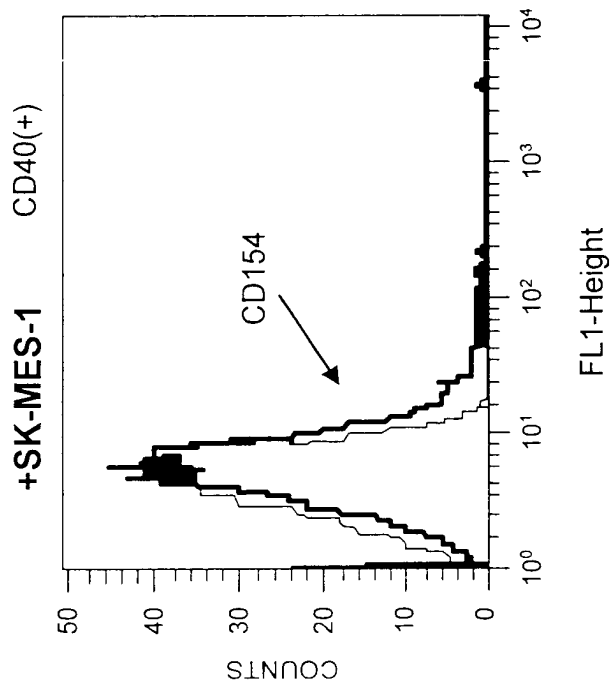
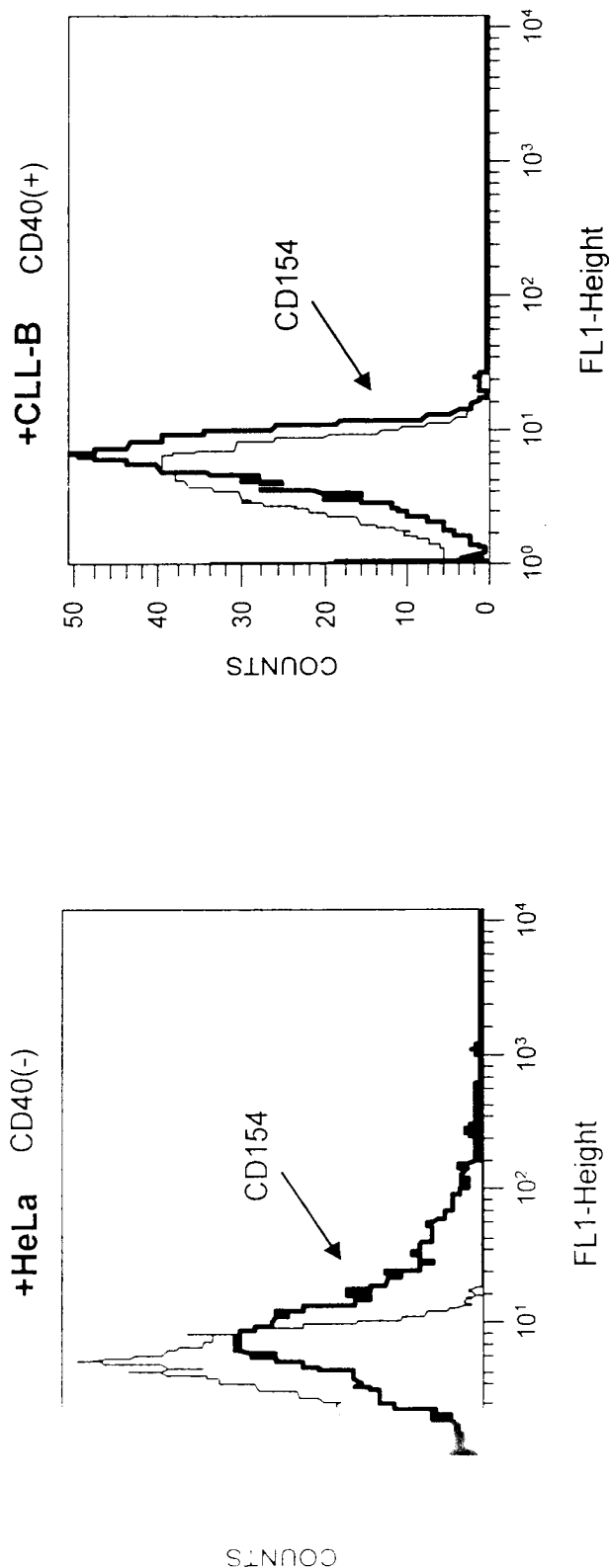


re 22a

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B



ure 22b

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RA SYNOVIAL FLUID AND PLASMA INHIBITION OF FAS-LIGAND

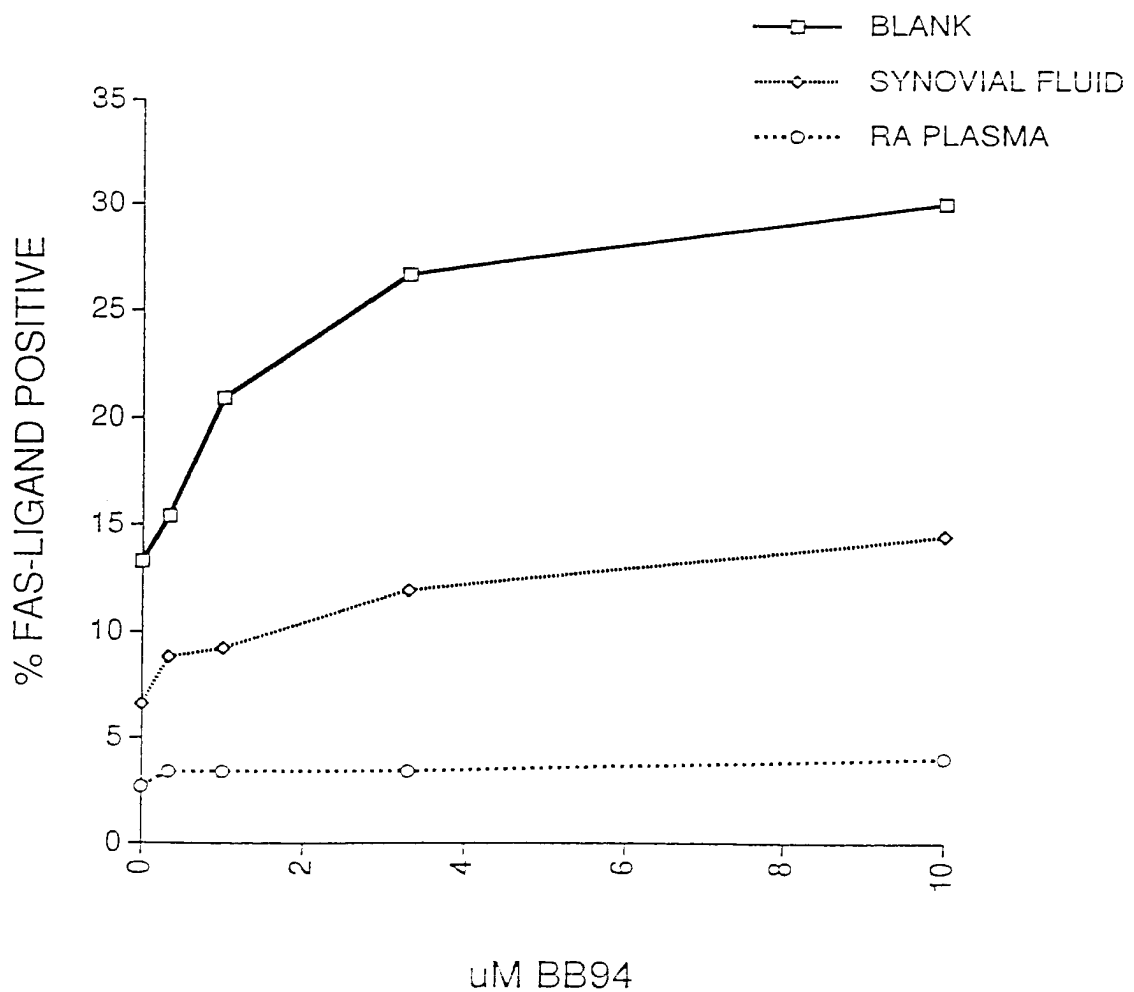


Figure 23



Gene Therapy of Leukemia

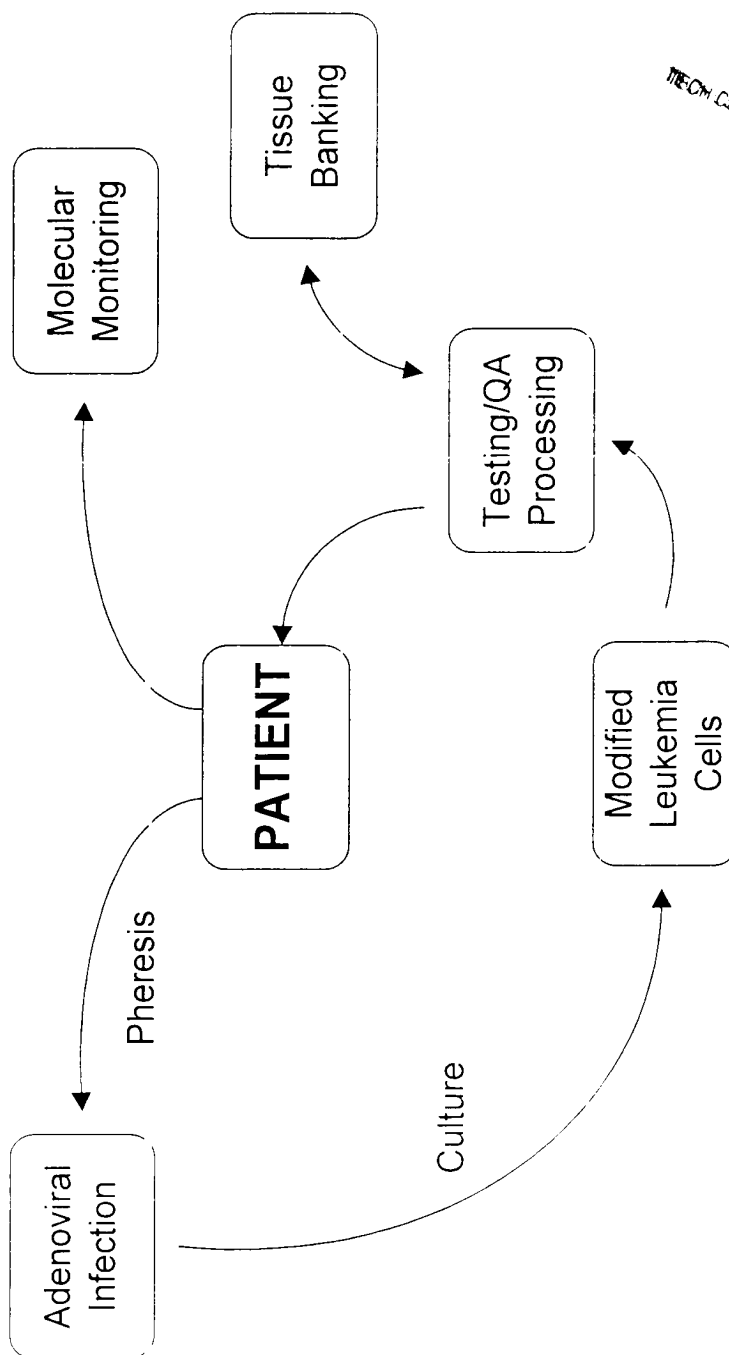
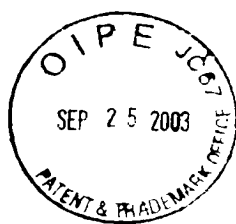


Figure 24

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Matrix Metalloproteinase Cleavage Sites

Cleavage

	P ₃	P ₂	P ₁	P' ₁	P' ₂	P' ₃	P' ₄
Collagenases							
Interstitial Collagenase	P ₃ Pro	P ₂ Leu	P ₁ Gly	P' ₁ Met	P' ₂ Arg	P' ₃ Met/Ala	P' ₄ Arg
Matrilysin	Leu	Met/Tyr	His	Leu	Leu	Gly	Lys
72 kD Gelatinase	Ala	Val/Gly	Glu	Ile	Phe	Val	Gln
Stromelysin	Asp	Ile	Tyr	Gln	Trp	Ser	Ile
Matrilysin 2	Ser	Gln/Arg	Ala	Pro	Glu	Glu	Gly
72 kD Gelatinase B	Glu	Asp	Phe	Phe	Ala	Phe	Ser
Matrilysin 3	Gly	Glu	Gln	Ala	Val/Gly	Arg	Glu
72 kD Gelatinase C	Arg	Ala	Asn	Tyr/Val	Ser	Pro	Ala
Matrilysin 4				[not K,E,W]	Asn		

Neutrophil Collagenase

P ₄	P ₃	P ₂	P ₁	P' ₁	P' ₂	P' ₃	P' ₄
Ala	Pro	Leu	Glu	Tyr	Ala	Gly	Arg
Gln	Leu	Gln	Gly/His	Ile	Leu	Met	Gln
Met			Ala	Leu	Trp	Ala	
Gly				Val			
P ₁				Phe			

Arg
same as MMP-1)

Figure 28A

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Gelatinases

MMP-2 Gelatinase A

P ₄	P ₃	P ₂	P ₁	P' ₁	P' ₂	P' ₃	P' ₄
Gly	Pro	Arg	Gly	Leu	Ala/Leu	Gly/Ala	Gln
Ile	Ala	Gln	Asn	Ile/Phe	Phe/Trp	Leu	Arg
Pro	Arg	Leu	Ala	Val/Met	Gly	Ser	His
Arg	Ala	Ala	His	Ala	Arg/Gln	Pro	Pro
Leu	Lys	Ile	Leu	Glu	His		
	His	Tyr	Gln/Asn		Val		

MMP-9 Gelatinase B

P ₄	P ₃	P ₂	P ₁	P' ₁	P' ₂	P' ₃	P' ₄
Gly	Pro	Arg	Gly	Leu	Glu	Ala	Thr
		Gln		Ile/Phe	Ala/Leu/Phe	Leu	
		Leu		Val/Met	Trp/Gly	Ser	
				Ala		Gly	

Stromelysins

MMP-3 Stromelysin 1

P ₄	P ₃	P ₂	P ₁	P' ₁	P' ₂	P' ₃	P' ₄
Asp	Pro	Phe	Glu	Leu	Arg	Ala	Thr
Ily	Ala	Leu/Met	Ala	Phe	Leu/Phe	Arg/Met	
Ile/Arg							
eu	Val	Tyr	Gln/Phe	Trp/Tyr	Trp	Gly	Pro
e	Leu	Pro/Gly/Glu	Asn	Ile	Val	Val/Ile	
Ile/Val							
eu	Thr	Ile	His	Val	Gln	Ser/Asn	Ala
ys	Phe	Ala	Gly	Met	His/Met	Glu/Thr	
Ily/Asp	Arg	Ser	Leu/Pro	Glu	Glu/Ser/Thr	Leu	
tg							
er/Lys/Phe							
ro/Met	Ser/Gly						
Ia/Phe/Gln							

Figure 28B



0 Stromelysin 2

P₃
Ala
Pro

P₂
Ile
His

P₁
His
Leu

P'₁
Ile
Leu

P'₂
Gln
Val

P'₃
Ala
Glu

P'₄
Glu
Ala

5

Matrilysin

P₃
Pro
Leu

P₂
Leu
Gln
Val

P₁
Glu
Met/Ala
Pro/Gln
Gly

P'₁
Leu
Ile
Met

P'₂
Arg
Met
Gln

P'₃
Ala
Val/Arg/Met
Gly

P'₄
Gln

Figure 28C

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